BOOK REVIEW

NUCLEAR ELECTRONICS I (SESSIONS 1–5)... pp 452 Being the Proceedings of the International Symposium on Nuclear Eelectronics organised by the French Society of Radioelectricians held in Paris 1958.

In September, 1958 the French Society of Radioelectricians organised a Colloquium on Nuclear Electronics in Paris. The publication under review is an edited version of the papers and discussions of this Colloquium published by the International Atomic Energy Agency from Vienna. The major part of the papers and discussions in this Colloquium was divided into five sessions, three of them devoted to scintillation counters and to fast counting techniques in the region of milli-micro seconds or less using photomultipliers. The fourth session was devoted mainly to pulse height and time analysers and the fifth to reactor instrumentation and reactor control techniques.

It is interesting to note that papers from many lands and different laboratories show parallel developments in the field of scintillation counting techniques. The papers also reflect the general attitude that one is fast approaching the limit of conventional electronic tubes in speed and pulse amplification. This is demonstrated by the general search for techniques for the elimination of ordinary electronic tubes in the achievement of improved measurements of fast pulses. The study of scintillation processes in many phosphors is also discussed in several papers as a prelude to attempts to use the fast initial component of the light pulse.

The field of pulse height and time analysers covered in the 4th session describes current efforts in this field. The necessity of using fast pulses has given rise to a few techniques different from the conventional pulse height analysers which have proved unsuitable for very fast pulses The topic is well covered in a preliminary review paper followed by several more or less detailed contributions on different schemes. The last group of papers on reactor instrumentation and control reflect mostly problems encountered in the control and instrumentation of the French Reactors and do not describe the techniques connected with the operation control of the novel fast reactors involving more difficult problems of reactor control.

It is interesting to find contributions on the use of digital computor techniques and standardised transistor circuitry for reactor control. Their greater reliability under radiation had been foreseen earlier and these techniques are likely to play an important role in future reactor instrumentation.

The IAEA venture of publishing proceedings of Symposia is, the reviewer feels, a timely and useful step in the dissemination of technical information and deserves our congratulations. The proceedings are well printed and the illustrations are clear and profuse.

B. D. N. C.